

HOW INTEX HELPED SUPERIOR DIE SET CORPORATION PRODUCE 35%
ABOVE CAPACITY, WITH ONLY 3% MORE ELECTRICITY

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ABSTRACT

A detailed energy usage and productivity study of the existing HVAC, lighting and process equipment was performed at the Superior Die Set Corporation located in Oak Creek, Wisconsin. The study began in January, 1984, and lasted for a period of 5 months. Implementing the Energy Productivity measures took until the end of 1984.

The objective of the study was to reduce wasted energy in the office and manufacturing area through the adoption of unobtrusive, simple, maintenance-free and quick pay-back technologies. Some of the steps taken to achieve the objective were:

1. Designed an excess electrical demand alarm system to allow for manual and automatic load shedding and to provide management with worker productivity data.
2. Rescheduled equipment operation using optimum start-stop control and time clocks.
3. Rebalanced the HVAC system in manufacturing, office and computer rooms.
4. Redesigned air compressors and induction hardener exhaust system to vent excess heat outside in summer only.
5. Installed motion detectors to turn off unneeded lighting in unoccupied areas.
6. Replaced all incandescent lighting with low-wattage fluorescent screw-in fixtures.
7. Installed current-reducing capacitors in fluorescent fixtures to reduce wattage, and air conditioning and maintenance costs.
8. Delamped overlit areas.

The overall implementation of the above measures has saved Superior Die Set Corporation \$35,673.00 or 16% of their annual electric bill (\$229,911.59). The installed cost of energy control equipment came to \$22,502.00. Therefore, a simple pay-back for the entire project was 0.6 year.

Prior to this Intex involvement with Superior Die Set's energy cost reduction program (in 1984), electrical costs were expected to increase by 12% over 1983 electrical cost figures. But after Intex implemented the Energy Management Program in June of 1984, Superior Die Set has kept 1984 costs to within +3% of the 1983 base level, while production output has increased by 27% in pounds shipped and 35% in sales dollar volume from the previous year.